# WEATHER OF THE ATLANTIC AND PACIFIC OCEANS



## NORTH ATLANTIC OCEAN

By F. A. YOUNG

The weather over the greater part of the North Atlantic during May was practically normal and gales were not reported on more than 5 days in any 5° square, the maximum occurring in the square between the forty-fifth and fiftieth parallels and the twenty-fifth and thirtieth meridians.

The Azores HIGH was unusually well developed until the 30th, and the daily barometer readings at Horta were all above the monthly normals until that date; on the 29th it read 30.14, on the 30th, 29.74, and on the 31st, 29.94 inches. Low pressure prevailed over northern Europe during the first half of the month while the last half was characterized by sudden changes.

Fog was observed on from 13 to 18 days over the Grand Banks, from 3 to 5 days off the coast of Europe, and from 1 to 4 days over the northern steamer lanes. No fog reports were received from vessels south of the 35th parallel.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian). North Atlantic Ocean, May, 1929*

| Stations | Average pressure | Departure | Highest | Date | Lowest | Date |
|---|---|---|---|---|---|---|
| | *Inches* | *Inch* | *Inches* | | *Inches* | |
| Julianehaab, Greenland | 29.77 | (1) | 30.28 | 5th | 29.20 | 18th. |
| Belle Isle, Newfoundland | 29.87 | [2] −0.07 | 30.30 | 21st | 28.98 | 17th. |
| Halifax, Nova Scotia | 30.07 | [3] +0.10 | 30.48 | 14th | 29.70 | 3d. |
| Nantucket | 30.07 | [3] +0.08 | 30.52 | 14th | 29.26 | 3d. |
| Hatteras | 30.13 | [3] +0.10 | 30.52 | 11th | 29.68 | 3d. |
| Key West | 30.05 | [3] +0.07 | 30.16 | 7th [4] | 29.90 | 2d. |
| New Orleans | 30.05 | [2] +0.05 | 30.20 | 10th [4] | 29.78 | 1st. |
| Cape Gracias, Nicaragua | 29.90 | [2] +0.03 | 29.96 | 7th [4] | 29.84 | 26th.[4] |
| Turks Island | 30.12 | [2] +0.12 | 30.20 | 6th [4] | 30.02 | 30th.[4] |
| Bermuda | 30.30 | [2] +0.19 | 30.44 | 12th | 30.06 | 3d. |
| Horta, Azores | 30.32 | [2] +0.18 | 30.60 | 26th | 29.64 | 31st. |
| Lerwick, Shetland Islands | 29.90 | [2] +0.10 | 30.46 | 29th | 29.08 | 7th. |
| Valencia, Ireland | 29.90 | [2] −0.05 | 30.21 | 9th | 29.44 | 6th. |
| London | 29.99 | [2] +0.07 | 30.26 | 29th | 29.34 | 6th. |

[1] No normal available.
[2] From normals shown on Hydrographic Office Pilot Chart based on observations at Greenwich mean noon, or 7 a. m., Seventy-fifth meridian time.
[3] From normals based on 8 a. m. observations.
[4] And on other date or dates.

On the 1st a well-defined depression was over the western section of the Gulf of Mexico; on the 2d the center was near Pensacola, on the 3d near New York, and on the 4th over the Gulf of St. Lawrence. This LOW was accompanied by moderate weather except on the evening of the 2d and morning of the 3d; at the time of observation on the latter date moderate to strong gales prevailed along the American coast between Hatteras and Nantucket.

From the 5th to 8th an area of low pressure was over the British Isles, and during this period moderate gales were reported by vessels in the eastern section of the steamer lanes as well as by land stations.

From the 10th to 12th the northeast trades in the vicinity of the Canal Zone were unusually strong, as shown by report in table from the American S. S. *F. Q. Barstow.*

On the 11th moderate gales were encountered over the steamer lanes between the fiftieth and fifty-fifth meridians and on the 12th between the thirtieth and thirty-fifth meridians.

Charts VIII to XI show the conditions over the ocean from the 13th to 16th inclusive.

From the 17th to 21st moderate weather prevailed as a rule, although on the 18th Belle Isle, Newfoundland, reported a westerly wind, force 10.

On the 22d a fairly well-developed disturbance was over Newfoundland and another off the coast of Ireland and moderate gales were reported by vessels in the western and middle sections of the steamer lanes.

On the 23d favorable conditions prevailed, with the exception of a limited disturbance central near 47° N., 15° W.

From the 24th to 29th the weather was comparatively featureless, with high pressure over extensive areas, although during this period some few vessels rendered gale reports.

On the 30th a well-developed LOW was central near 45° N., 35° W.; this moved but little during the next 24 hours and strong westerly gales prevailed in the southerly quadrants on both the 30th and 31st.

## OCEAN GALES AND STORMS, MAY, 1929

| Vessel | Voyage | | Position at time of lowest barometer | | Gale began | Time of lowest barometer | Gale ended | Lowest barometer | Direction of wind when gale began | Direction and force of wind at time of lowest barometer | Direction of wind when gale ended | Highest force of wind and direction | Shifts of wind near time of lowest barometer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From— | To— | Latitude | Longitude | | | | | | | | | |
| **North Atlantic Ocean** | | | ° ′ | ° ′ | | | | *Inches* | | | | | |
| Livenza, Ital. S. S. | Palermo | New York | 39 57 N | 72 04 W | May 1 | 11 p, 2 | May 3 | 29.09 | SSE | S, 9 | S | S, 9 | Steady. |
| Astral, Am. S. S. | Providence | Canal Zone | 38 20 N | 72 21 W | 3 | 10 a, 3 | 3 | 29.11 | SW | SW, 10 | NW | WSW, 11 | Do. |
| Hellig Olav, Dan. S. S. | Oslo | Halifax | 55 35 N | 21 40 W | 5 | 8 p, 5 | 6 | 29.20 | NW | NW, 8 | NNW | NW, 9 | Do. |
| Lepanto, Br. S. S. | New York | Hull | 49 40 N | 7 30 W | 5 | 3 a, 6 | 6 | 29.19 | NNE | NNW | WNW | NNW, 10 | NNW-WNW. |
| F. Q. Barstow, Am. S. S. | Cartagena | Baltimore | 11 38 N | 75 30 W | 10 | 4 p, 10 | 12 | 29.65 | NE | NE, 7 | E | NE, 8 | NE-E. |
| Asia, Fr. S. S. | Gibraltar | Providence | 38 25 N | 59 40 W | 10 | 10 p, 10 | 11 | 29.67 | SSE | NW, 8 | NNE | SW, 9 | NW-N-NNE. |
| Parklaan, Du. S. S. | Rotterdam | Montreal | 51 30 N | 21 30 W | 12 | 6 p, 12 | 13 | 29.22 | SSW | NW, 11 | WNW | —, 11 | SE-NW. |
| Anacortes, Am. S. S. | Ardrossan | Baltimore | 53 30 N | 15 00 W | 12 | 2 p, 13 | 13 | 28.81 | SE | S | S | S, 11 | S-SW-W. |
| Balsam, Am. S. S. | Londonderry | do | 46 28 N | 37 25 W | 12 | 4 p, 14 | 17 | 29.64 | WNW | SW, 7 | W | —, 10 | |
| Quaker City, Am. S. S. | Middlesbrough. | Philadelphia | 51 00 N | 34 10 W | 15 | Noon, 15 | 16 | 29.36 | SW | SW, 8 | WNW | —, 10 | Steady. |
| Nubian, Br. S. S. | Montreal | Avonmouth | 51 35 N | 14 37 W | 21 | 3 p, 21 | 21 | 29.58 | S | S, 8 | W | S, 9 | |
| E. J. Sadler, Am. S. S. | do | Corpus Christi. | 36 25 N | 68 50 W | 21 | 1 a, 22 | 22 | 29.97 | S | SSW, 9 | WNW | SSW, 9 | SSW-NNW |
| Davisian, Br. S. S. | Liverpool | Boston | 49 06 N | 25 23 W | 22 | Noon, 22 | 23 | 29.45 | NW | NW, 7 | NW | NW, 9 | Steady. |
| Tongking, Dan. M. S. | Antwerp | St. Thomas | 47 40 N | 12 16 W | 22 | 7 a, 22 | 24 | 29.58 | SW | SW, 7 | WNW | NW, 9 | SW-W-NW. |
| Haarlem, Du. S. S. | Barahona | Holland | 49 16 N | 21 13 W | 21 | 11 a, 24 | 24 | 29.71 | NNW | WSW, 3 | NNW | NNW, 9 | |
| Tongking, Dan. M. S. | Antwerp | St. Thomas | 42 40 N | 24 20 W | 25 | 4 a, 25 | 25 | 30.06 | W | SW, 7 | NW | WNW, 9 | SW-WNW. |
| Lubrafol, Belg. S. S. | Port Arthur | Hamburg | 43 03 N | 41 32 W | 30 | 8 p, 30 | 31 | 29.68 | WNW | WNW, 9 | S | W, 11 | WNW-W-S. |
| Bellflower, Am. S. S. | Manchester | New York | 45 48 N | 38 01 W | 30 | 4 a, 31 | 31 | 28.72 | W | W, 9 | N | NW, 10 | |

*Ocean gales and storms, May, 1929*—Continued

| Vessel | Voyage | | Position at time of lowest barometer | | Gale began | Time of lowest barometer | Gale ended | Lowest barometer | Direction of wind when gale began | Direction and force of wind at time of lowest barometer | Direction of wind when gale ended | Highest force of wind and direction | Shifts of wind near time of lowest barometer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From— | To— | Latitude | Longitude | | | | | | | | | |
| **North Pacific Ocean** | | | ° ′ | ° ′ | | | | *Inches* | | | | | |
| Shabonee, Br. S. S. | Yokohama | San Pedro | 44 30 N | 175 10 W | May 3 | 6 a, 3 | May 3 | 29.53 | SSW | SE, 8 | SSW | SE, 10 | SE-SSW. |
| Clyde Maru, Jap. S. S. | Miike | Grays Harbor | 48 41 N | 172 10 W | 2 | 1 a, 3 | 5 | 29.08 | S | S | SSW | SE, 10 | S-SE-SW. |
| New York, Am. S. S. | Hong Kong | San Francisco | 46 10 N | 172 31 E | 2 | | 5 | 28.69 | S | Calm | W | W, 10 | E-O-W. |
| California, Am. S. S. | Otaru | do | 48 00 N | 176 50 W | 3 | 4 a, 3 | 4 | 28.96 | SE | SW, 7 | SW | SE, 11 | SSW-SW. |
| Kohnan Maru, Jap. S. S. | Miike | Portland | 47 34 N | 571 55 E | 3 | 9 p, 3 | 5 | 28.65 | N | WNW, 9 | WSW | WNW, 9 | N-W-WSW. |
| Atlanta City, Am. S. S. | Dairen | Honolulu | 31 33 N | 129 30 E | 6 | 6 | 7 | 29.68 | SE | SE, 7 | SW | SSW, 9 | |
| Satanta, Br. S. S. | San Pedro | Shanghai | 31 00 N | 133 30 E | 7 | 7 | 8 | 29.82 | S | S, 8 | W | S, 8 | S-SW. |
| Columbia Maru, Jap. M. S. | Vancouver | Yokohama | 50 30 N | 179 30 W | 10 | 4 p, 11 | 11 | 29.16 | S | NNE, 8 | N | ENE, 9 | NE-NNE-N. |
| Ryujin Maru, Jap. S. S. | Miike | Vancouver | 49 19 N | 178 30 W | 11 | 1 p, 11 | 11 | 28.83 | ESE | NE, 8 | NE | NE, 9 | Steady. |
| Toyama Maru, Jap. S. S. | Yokohama | Victoria | 50 08 N | 167 10 W | 11 | 4 p, 12 | 12 | 29.04 | E | SE, 2 | SSW | E, 9 | ESE-E-SE. |
| Illinois, Am. S. S. | Portland | Shanghai | 51 40 N | 170 35 W | 13 | 2 a, 13 | 17 | 29.01 | W | W, 8 | WNW | W, 8 | W-S-W. |
| Toba Maru, Jap. S. S. | Yokohama | San Francisco | 45 49 N | 148 30 W | 19 | 1 a, 20 | 21 | 28.88 | SE | SE, 8 | SW | SE, 8 | |
| Golden Fleece, Am. S. S. | Dairen | do | 47 20 N | 156 00 W | 19 | 11 p, 19 | 22 | 28.94 | N | W, 9 | W | W, 10 | NW-W. |
| Pennsylvania, Am. S. S. | Hong Kong | do | 29 50 N | 129 06 E | 22 | 8 a, 22 | 22 | 29.57 | SE | NE, 8 | N | NE, 8 | SE-NE-N. |
| Irion, Br. S. S. | Yokohama | Victoria | 36 51 N | 147 02 E | 23 | Mdt, 24 | 24 | 29.23 | SE | S, 6 | SW | S, 8 | Slight. |
| La Perla, Am. S. S. | San Jose | San Francisco | 33 38 N | 120 18 W | 24 | 8 a, 24 | 26 | 29.93 | W | W, 7 | NW | NW, 8 | W-NW. |
| Arabia Maru, Jap. S. S. | Victoria | Yokohama | 53 00 N | 158 30 W | 25 | 8 a, 26 | 27 | 29.02 | ESE | SE, 8 | W | W, 8 | SE-W. |
| Sylvan Arrow, Am. S. S. | San Pedro | Balboa | 14 34 N | 95 41 W | 29 | 2 a, 30 | 30 | 29.60 | E | ESE, 8 | S | ESE, 8 | ENE-ESE. |
| Tuscaloosa City, Am. S. S. | New York | Honolulu | 14 28 N | 97 26 W | 29 | 2 p, 30 | 30 | 29.48 | SW | E, 11 | NW | E, 11 | SSE-E-NE. |
| Pennsylvanian, Am. S. S. | Los Angeles | New York | 15 00 N | 97 30 W | 30 | 9 p, 30 | 31 | 29.21 | SE | NE, 12 | SE | NE, 12 | NE-SE. |
| Nebraskan, Am. S. S. | New York | San Francisco | 15 05 N | 97 42 W | 30 | Noon, 31 | June 1 | 29.71 | SSW | SSW, 8 | W | SW, 8 | SSW-W. |
| **South Atlantic Ocean** | | | | | | | | | | | | | |
| Ocean Prince, Br. S. S. | Buenos Aires | St. Vincent | 34 11 S | 52 51 W | 8 | 7 p, 8 | May 8 | 29.65 | NNW | NNW | NNW | NNW, 10 | Steady. |
| **South Pacific Ocean** | | | | | | | | | | | | | |
| Raisdale, Br. S. S. | Panama | Auckland | 33 01 S | 148 00 W | 5 | 3 a, 5 | 5 | 29.63 | WSW | WSW, 7 | SW | WSW, 9 | Do. |
| Do | do | do | 36 28 S | 179 20 E | 12 | 12 | 14 | 29.86 | E | E, 4 | E | E, 9 | Do. |
| Joseph Seep, Am. S. S. | Buenos Aires | Talara | 48 40 S | 77 20 W | 9 | 7 p, 11 | 13 | 29.25 | N | W, 2 | W | NW, 10 | |

## NORTH PACIFIC OCEAN

551.506 (265.2)

By WILLIS E. HURD

Cyclonic conditions over the northern part of the ocean were somewhat brisker in May than in April, and the average atmospheric pressure in the Aleutians and the Bering Sea was lower than in the preceding month, and considerably below the normal. The Aleutian cyclone intensified on the 3d and 4th in upper midocean, and again from the 12th to about the 20th from the Alaskan Peninsula westward. From the 20th to the 23d it affected principally the western waters of the Gulf of Alaska, but thereafter to the end of the month it was shallow and of little influence.

The California-Pacific anticyclone was abnormally well developed practically throughout the month, being little disrupted by low pressure areas coming within its usual boundaries. Anticyclonic conditions on the average extended from the eastern part of the Gulf of Alaska southward and thence westward almost to the Asiatic coast, near which the HIGH was considerably broken by numerous small cyclones that came from the continent or gathered in adjoining waters. At Midway Island the average pressure, 30.19 inches, was the highest in May for many years.

Barometric data for several island and mainland coast stations in west longitudes are given in the following table.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level at indicated hours, North Pacific Ocean and adjacent waters, May, 1929*

| Stations | Average pressure | Departure from normal | Highest | Date | Lowest | Date |
|---|---|---|---|---|---|---|
| | *Inches* | *Inch* | *Inches* | | *Inches* | |
| Point Barrow [1] | | | 30.48 | 5th | 29.92 | 8th. |
| Dutch Harbor [2 3] | 29.66 | −0.24 | 30.20 | 29th | 29.06 | 12th.[4] |
| St. Paul [2 5] | 29.66 | −0.20 | 30.30 | 29th | 28.98 | 17th. |
| Kodiak [2] | 29.83 | −0.04 | 30.40 | 12th | 29.08 | 22d. |
| Midway Island [2 3] | 30.19 | +0.10 | 30.34 | 26th | 29.98 | 29th. |
| Honolulu [6] | 30.05 | 0.00 | 30.16 | 16th | 29.91 | 28th. |
| Juneau [6] | 30.08 | +0.09 | 30.38 | 10th | 29.69 | 24th. |
| Tatoosh Island [6 7] | 30.11 | +0.07 | 30.47 | 9th | 29.71 | 30th. |
| San Francisco [6 7] | 30.00 | +0.02 | 30.19 | 8th | 29.79 | 26th. |
| San Diego [6 7] | 29.94 | +0.01 | 30.13 | 8th | 29.69 | 26th. |

[1] For 18 days, no average computed.
[2] P. m. observations only.
[3] For 29 days.
[4] And on other dates.
[5] For 30 days.
[6] A. m. and p. m. observations.
[7] Corrected to 24-hour mean.

Gales of force 8 and upward occurred on about 15 days of the month, being of about the same frequency as in April, although less widely distributed over the usual stormy portions of the sea. Strong to whole gales, however, were more frequent along the northern steamer routes than in the preceding month, partly owing to the greater fluctuating developments of the Aleutian LOW; so, although the month can hardly be called a stormy one, its weather was rougher over portions of the trans-Pacific passages than that of April.